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TITLE

PREPARATION OF

α-HYDROXYMETHYL ACRYLATE

COMPOUND

ABSTRACT :

PROBLEM TO BE SOLVED: To obtain the subject α-hydroxymethyl acrylate in high yield, effectively suppressing production of by-product by setting the amount of water of a reaction system in a specific range in a reaction of an acrylate compound and an aldehyde compound.

SOLUTION: The subject compound of formula III (e.g., methyl α- hydroxymethyl acrylate) is obtained by reacting a compound of formula I (R1 is an organic residue) (e.g., methyl acrylate) and a compound of formula II (R2 is H or an organic residue) (e.g., acetaldehyde) in the presence of a tertiary amine catalyst (e.g., triethylamine) and water. In the reaction the mole fraction of the three components, the acrylate compound, the tertiary amine and water is (25-50/15-40/5-45) as a character, and the preferable solubility of the acrylate to water is ≥0.1 at 20°C.

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